

File - Bushland Reports 1957 Screw-worm Eradication For Annals
Jan 3 1958

SCREW-WORM ATTRACTANT STUDIES IN 1957

Research toward development of an attractant for screw-worms was carried out in cooperation with chemists of the Orlando station. This work was necessarily terminated in April because of full time requirements on rearing and releasing flies in a large scale field test. Attractant studies were resumed in October but on a limited scale due to participation in planning with the eradication program and preparation for large scale rearing at the Bithlo plant.

The juices recovered from thawing of frozen ground beef heart and incubated for 36 to 96 hours at 97° F. has proven most attractive in laboratory tests. In all tests the most attractive material has not been consistent with a definite incubation period. The P. H. reading before incubation indicates this variation to be caused by some deterioration which takes place before the meat is frozen.

Preliminary tests with separations of the solid and liquid phase of the incubated juice, and fractional precipitation of the liquid phase did not isolate a material more attractive than before separation.

In preliminary tests, 100 ppm of procaine, penicillin and streptomycin S04 in heart juice incubated for 36 hours was less attractive than plain juice incubated for 36 hours.

These results indicated the attractant was produced by bacterial action.

Oviposition was obtained from wild flies in two laboratory cage tests. The wild flies were induced to oviposit on cowhide adjacent to cotton saturated with the attractant. Oviposition was also obtained on a rabbit in a similar manner. In a single field test, using the attractant on cowhide, several screw-worms visited the hide but no oviposition was obtained. ~~Field testing the attractant on animals has been postponed until there is an increase in the natural population.~~

